=> d his

(FILE 'HOME' ENTERED AT 09:14:45 ON 09 NOV 1998)

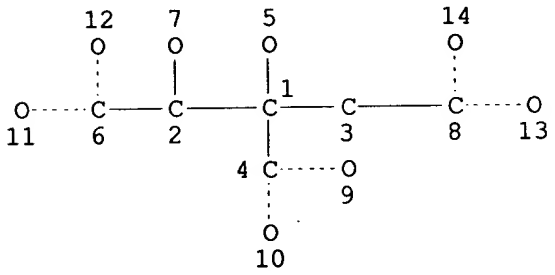
FILE 'REGISTRY' ENTERED AT 09:14:55 ON 09 NOV 1998
E HYDROXY CITRIC ACID/CN

FILE 'HCAPLUS' ENTERED AT 09:15:35 ON 09 NOV 1998
L1 4 S HYDROXY CITRIC ACID

FILE 'REGISTRY' ENTERED AT 09:16:03 ON 09 NOV 1998
L2 1 S 27750-10-3
E HYDROXYCITRIC ACID/CN
L3 STR 27750-10-3
L4 30 S L3 FUL FAM
SAVE L4 TEMP OH/A

FILE 'HCAPLUS' ENTERED AT 09:17:38 ON 09 NOV 1998
L5 14 S L4/P
L6 354 S GARCINIA OR GARCINIA/AB
L7 7 S L5 AND L6
L8 7 S L5 NOT L7
=> d que stat l4

L3 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE
L4 30 SEA FILE=REGISTRY FAM FUL L3

100.0% PROCESSED 249 ITERATIONS 30 ANSWERS

=> d .ca hitstr 17 1-7;d .ca 18 1-7

L7 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1998:631428 HCAPLUS
DN 129:265459
TI Process for producing calcium salt of (-)-erythrohydroxycitric acid
IN Sharma, Nina; Parashuraman, Meena; Raman, Girija
PA Lupin Laboratories Ltd., India
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
PI EP 866137 A1 19980923
DS R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
AI EP 97-301777 19970317
DT Patent
LA English
AB A process for extn. of hydroxycitric acid as calcium salt from the fruit rind of **Garcinia** species such as **Garcinia** cambogia, **Garcinia** indica and **Garcinia** atroviridis, which comprises reaction of an aq. suspension of **Garcinia** rind with a mixt. of pectic enzymes such as polygalacturonase (PG) and pectin lyase (PL), at a temp. of 40.degree. followed by addn. of an alkali such as sodium hydroxide and, from the intermediate alkali metal salt of hydroxycitric acid the corresponding calcium salt is prepd. by addn. of calcium chloride. The calcium salt of (-)-hydroxycitric acid is therapeutically active component.
IT **213385-58-1P**
RL: PUR (Purification or recovery); PREP (Preparation)
(process for producing calcium salt of (-)-erythrohydroxycitric acid)
IC ICM C12S003-00
ICS C07C059-245
CC 63-3 (Pharmaceuticals)
IT Extraction
Fruit
Garcinia
Garcinia atroviridis
Garcinia cambogia
Garcinia indica
(process for producing calcium salt of (-)-erythrohydroxycitric acid)
IT **213385-58-1P**
RL: PUR (Purification or recovery); PREP (Preparation)
(process for producing calcium salt of (-)-erythrohydroxycitric acid)
IT **213385-58-1P**
RL: PUR (Purification or recovery); PREP (Preparation)
(process for producing calcium salt of (-)-erythrohydroxycitric acid)
RN 213385-58-1 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

/ Structure 1 in file .gra /

L7 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1998:268507 HCAPLUS
DN 128:278299
TI Magnesium (-)-hydroxycitrate, method of preparation, applications, and compositions, in particular pharmaceutical, containing same
IN Shrivastava, Ravi; Lambropoulos, Patrick
PA Shrivastava, Ravi, Fr.; Lambropoulos, Patrick
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
PI WO 9817671 A1 19980430
DS W: AU, CA, JP, KR, US
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
AI WO 97-FR1860 19971017
PRAI FR 96-13094 19961022
DT Patent
LA French
AB The invention concerns magnesium (-)-hydroxycitrate, its method of prepn., its applications in dietetics and in therapeutics particularly in the cardiovascular field, and pharmaceutical compns. contg. it. Thus, magnesium (-)-hydroxycitrate is prepd. from reaction of an ext. of **Garcinia** cambogia with an aliph. alc. (e.g., EtOH) to obtain a ppt. which is treated with a tannin fixative (e.g., poly(vinylpyrrolidone)), filtered, and the remaining soln. agitated with an anion exchange resin, the supernatant is eliminated, and the product is eluted and dried. Magnesium (-)-hydroxycitrate is useful in the therapeutic treatment of cardiovascular diseases. The antioxidant and antihypertensive activities of the (-)-hydroxycitrate in rat, its antihypercholesterolemic and antiatherosclerotic activities in rabbit, and the toxicity in rat are reported. An assocn. of magnesium (-)-hydroxycitrate with Mg, Cu, Co, Zn, Ni, Se, Si, Mn, Li, or Fe, ionized or not, and at least one vitamin is claimed. Pharmaceutical formulations contg. magnesium (-)-hydroxycitrate are claimed (6 examples). Magnesium (-)-hydroxycitrate or an assocd. compd. described above are applicable to dietetic/nutritional or cosmetic products.
IT **132436-67-0P**
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of magnesium (-)-hydroxycitrate for treatment of cardiovascular diseases)
IC ICM C07F003-02
CC 78-5 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 1, 18, 62, 63
ST magnesium hydroxycitrate prepn treatment cardiovascular disease; antiatherosclerotic magnesium hydroxycitrate; antihypertensive magnesium hydroxycitrate; antioxidant magnesium hydroxycitrate; anticholesteremic magnesium hydroxycitrate; **Garcinia** cambogia ext magnesium hydroxycitrate prepn
IT **Garcinia** cambogia
(prepn. of magnesium (-)-hydroxycitrate from ext. of **Garcinia** cambogia for treatment of cardiovascular diseases)

IT 64-17-5, Ethanol, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(for extn. of (-)-hydroxycitrate from ext. of **Garcinia** cambogia to prep. magnesium salt)
IT **132436-67-0P**
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of magnesium (-)-hydroxycitrate for treatment of cardiovascular diseases)
IT **132436-67-0P**
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of magnesium (-)-hydroxycitrate for treatment of cardiovascular diseases)
RN 132436-67-0 HCAPLUS
CN D-threo-Pentaric acid, 3-C-carboxy-2-deoxy-, magnesium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

/ Structure 2 in file .gra /

L7 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1997:41983 HCAPLUS
DN 126:65382
TI A new process for the production of potassium hydroxy citric acid, and compositions containing the potassium hydroxy citric acid
IN Majeed, Muhammed; Badmaev, Vladimir; Rajendran, R.
PA Sabinsa Corporation, USA; Majeed, Muhammed; Badmaev, Vladimir; Rajendran, R.
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
PI WO 9636585 A1 19961121
DS W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE
AI WO 96-US6554 19960515
PRAI US 95-440968 19950515
DT Patent
LA English
AB The present invention provides new processes for the synthesis or isolation of hydroxycitric acid in the form of a potassium salt from **Garcinia** fruit. The present invention also provides compns. contg. the potassium hydroxy citrate for use a s appetite suppressants.
IT **185196-38-7P**
RL: BMF (Bioindustrial manufacture); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(prepn. of potassium hydroxycitrate from **Garcinia**

fruit)
IC ICM C07C059-245
ICS C07C059-265; A61K031-19
CC 63-4 (Pharmaceuticals)
ST potassium hydroxycitrate **Garcinia** extn
IT Appetite depressants
Garcinia
(prepn. of potassium hydroxycitrate from **Garcinia** fruit)
IT Aliphatic alcohols
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(prepn. of potassium hydroxycitrate from **Garcinia** fruit)
IT **185196-38-7P**
RL: BMF (Bioindustrial manufacture); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(prepn. of potassium hydroxycitrate from **Garcinia** fruit)
IT 27750-10-3, (-)-Hydroxycitric acid
RL: BOC (Biological occurrence); RCT (Reactant); BIOL (Biological study); OCCU (Occurrence)
(prepn. of potassium hydroxycitrate from **Garcinia** fruit)
IT **185196-38-7P**
RL: BMF (Bioindustrial manufacture); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(prepn. of potassium hydroxycitrate from **Garcinia** fruit)
RN 185196-38-7 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

/ Structure 3 in file .gra /

L7 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1996:483470 HCAPLUS
DN 125:195106
TI ATP-Citrate Lyase as a Target for Hypolipidemic Intervention. Design and Synthesis of 2-Substituted Butane-1,4-dioic Acids as Novel, Potent Inhibitors of the Enzyme
AU Gribble, Andrew D.; Dolle, Roland E.; Shaw, Antony; McNair, David; Novelli, Riccardo; Novelli, Christine E.; Slingsby, Brian P.; Shah, Virendra P.; Tew, David; et al.
CS Departments of Medicinal Chemistry, SmithKline Beecham Pharmaceuticals Ltd, The Frythe/Welwyn/Hertfordshire, AL6 9AR, UK
SO J. Med. Chem. (1996), 39(18), 3569-3584
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
OS CJACS

GI

/ Structure 4 in file .gra /

AB ATP-citrate lyase is the primary enzyme responsible for the synthesis of cytosolic acetyl-CoA in many tissues. Inhibitors of the enzyme represent a potentially novel class of hypolipidemic agent, which are anticipated to have combined hypocholesterolemic and hypotriglyceridemic properties. A series of 2-substituted butane-1,4-dioic acids have been designed and synthesized as inhibitors of the enzyme. The best compds. have reversible Ki's in the 1-3 .mu..MU. range against the isolated rat enzyme. As representative of this compd. class, I has been shown to exert its inhibitory action through a mainly competitive mechanism with respect to citrate and a noncompetitive one with respect to CoA. None of the inhibitors were able to inhibit cholesterol and/or fatty acid synthesis in HepG2 cells. This has been attributed to the adverse physicochem. properties of the mols. leading to a lack of cell penetration. Despite this, a lead structural class of compd. has been identified with the potential for modification into potent, cell-penetrant, and efficacious inhibitors of ATP-citrate lyase.

IT **27750-10-3P**
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of butane-1,4-dioic acids as inhibitors of the enzyme ATP-citrate lyase)

CC 25-17 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 7

IT **27750-10-3P** 180622-85-9P 180622-86-0P 180622-87-1P
180622-88-2P 180622-89-3P 180622-90-6P 180622-91-7P
180622-92-8P 180622-93-9P 180622-94-0P 180622-95-1P
180622-96-2P 180622-97-3P 180622-98-4P 180622-99-5P
180623-00-1P 180623-01-2P 180623-02-3P 180623-03-4P
180623-04-5P 180623-05-6P 180623-06-7P 180623-07-8P
180623-08-9P 180623-09-0P 180623-10-3P 180623-11-4P
180623-12-5P 180623-13-6P 180623-14-7P 180623-15-8P
180623-16-9P 180623-17-0P 180623-18-1P 180623-19-2P
180623-20-5P 180623-21-6P 180623-22-7P 180623-23-8P
180623-24-9P 180623-25-0P 180623-26-1P 180623-27-2P
180623-28-3P 180623-29-4P 180623-30-7P 180623-31-8P
180623-32-9P 180623-33-0P 180623-34-1P 180623-35-2P
180623-36-3P 180623-37-4P 180623-38-5P 180623-39-6P
180623-40-9P 180623-41-0P 180623-42-1P 180623-43-2P
180623-44-3P
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of butane-1,4-dioic acids as inhibitors of the enzyme ATP-citrate lyase)

IT 79-37-8, Oxalyl chloride 105-45-3, Methyl acetoacetate 111-24-0, 1,5-Dibromopentane 120-83-2, 2,4-Dichlorophenol 554-00-7, 2,4-Dichloroaniline 590-97-6, Bromomethyl acetate 603-35-0, Triphenylphosphine, reactions 617-52-7, Dimethyl itaconate 874-42-0, 2,4-Dichlorobenzaldehyde 1122-41-4, 2,4-Dichlorobenzenethiol 2969-81-5, Ethyl 4-bromobutyrate 4509-90-4 13325-10-5, 4-Amino-1-butanol 16271-33-3, 2,4-

Dichlorobenzenesulfonyl chloride 17814-85-6, 4-Carboxybutyltriphenylphosphonium bromide 27750-13-6, **Garcinia** lactone 27976-27-8, 6-Phenylhexyl bromide 32807-28-6, Methyl 4-chloroacetoacetate 37734-05-7, Methyl 3-oxo-4-pentenoate 50816-19-8, 8-Bromooctanol 99725-07-2, 2,4-Dichloro-6-phenylbenzaldehyde 180622-61-1 180622-64-4
RL: RCT (Reactant)
(prepn. of butane-1,4-dioic acids as inhibitors of the enzyme ATP-citrate lyase)

IT **27750-10-3P**
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of butane-1,4-dioic acids as inhibitors of the enzyme ATP-citrate lyase)

RN 27750-10-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

/ Structure 5 in file .gra /

L7 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1996:328556 HCAPLUS
DN 125:9152
TI Hydroxycitric acid concentrate and method of making
IN Moffett, Scott Alexander; Bhandari, Ashok Kumar; Ravindranath, Bhagavathula
PA Renaissance Herbs, Inc., USA; Vittal Mallya Scientific Research Foundation
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
PI WO 9605741 A1 19960229
DS W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
AI WO 95-US10707 19950822
PRAI US 94-295281 19940824
DT Patent
LA English
AB A hydroxycitric acid conc. prepd. from **Garcinia** rind including 23 to 54% by wt. free hydroxycitric acid, 6 to 20% by wt. lactone of hydroxycitric acid, 0.001 to 8% by wt. citric acid, and 32 to 70% by wt. water has been claimed, wherein the free hydroxycitric acid, the lactone of hydroxycitric acid and the citric acid constitute 94 to 99% by wt. of total solutes dissolved in the water. Also disclosed is a method of prepg. such a conc. from **Garcinia** rind, as well as food products contg. hydroxycitric acid.

IT **27750-10-3P**, Hydroxycitric acid
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of hydroxycitric acid conc.)
IC ICM A23L002-78
ICS A23L003-3508
CC 17-6 (Food and Feed Chemistry)
ST hydroxycitrate conc **Garcinia** beverage snack
IT Beverages
Dietary fiber
(concn. of hydroxycitric acid from **Garcinia** rind)
IT **Garcinia**
(rind; concn. of hydroxycitric acid from **Garcinia** rind)
IT Food
(snack, bar; concn. of hydroxycitric acid from **Garcinia** rind)
IT 50-81-7, Vitamin C, biological studies 77-92-9, Citric acid, biological studies 27750-13-6, **Garcinia** lactone
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(concn. of hydroxycitric acid from **Garcinia** rind)
IT 1310-58-3, Potassium hydroxide, biological studies 1310-73-2, Sodium hydroxide, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(concn. of hydroxycitric acid from **Garcinia** rind)
IT **27750-10-3P**, Hydroxycitric acid
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of hydroxycitric acid conc.)
IT **27750-10-3P**, Hydroxycitric acid
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of hydroxycitric acid conc.)
RN 27750-10-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

/ Structure 6 in file .gra /

L7 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1996:43524 HCAPLUS
DN 124:97375
TI (-)-Hydroxycitric acid from **Garcinia** cambogia.
AU Singh, R.P.; Jayaprakasha, G.K.; Sakariah, K.K.
CS Manpower Development, Central Food Technological Research Institute, Mysore, 570 013, India
SO Biol. Mem. (1995), Volume Date 1995, 21(1), 27-33
CODEN: BMEMDK; ISSN: 0379-8097
DT Journal
LA English
AB Crystals of (-)-hydroxycitric acid were prepd. from water ext. of G. cambogia by pptn. as calcium or barium salt and desalting on cation exchange resin. Water was removed by distn. with immiscible solvent, followed by recrystn. of (-)-hydroxycitric acid lactone in ether. Purity of the prepn. was confirmed by spectroscopic and

chem. studies.
IT **27750-10-3P**, (-)-Hydroxycitric acid
RL: PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**Garcinia** cambogia.)
CC 63-4 (Pharmaceuticals)
ST hydroxycitric acid **Garcinia**
IT **Garcinia** cambogia
(hydroxycitric acid from)
IT **27750-10-3P**, (-)-Hydroxycitric acid
RL: PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**Garcinia** cambogia.)
IT **27750-10-3P**, (-)-Hydroxycitric acid
RL: PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**Garcinia** cambogia.)
RN 27750-10-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

/ Structure 7 in file .gra /

L7 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1970:89707 HCAPLUS
DN 72:89707
TI Isolation and properties of hydroxycitric acid
AU Lewis, Yohan Srimanth
CS Cent. Food Technol. Res. Inst., Mysore, India
SO Methods Enzymol. (1969), 13, 613-19
CODEN: MENZAU
DT Journal
LA English
AB Hydroxycitric acid (1,2-dihydroxypropane-1,2,3-tricarboxylic acid)can exist as 4 isomers. The acid as a lactone is isolated from the dried fruit rinds of **Garcinia** cambogia by formation of the K+ salt or by extn. with acetone. An isomer is extd. from the calyxes of Hibiscus sabdariffa by acetone extn. The lactones and acids are hygroscopic, and sol. in water and alc. The melting point of one lactone is 183.degree., that of another 178.degree..
IT **27750-10-3P 27750-11-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
CC 23 (Aliphatic Compounds)
IT **27750-10-3P 27750-11-4P** 27750-12-5P
27750-13-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT **27750-10-3P 27750-11-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 27750-10-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

/ Structure 8 in file .gra /

RN 27750-11-4 HCAPLUS
CN D-threo-Pentaric acid, 3-C-carboxy-2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

/ Structure 9 in file .gra /

L8 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1983:452977 HCAPLUS
DN 99:52977
TI Apparent stability constants of magnesium and calcium complexes of tricarboxylates
AU Gabriel, Jerome L.; Aogaichi, Tadashi; Dearolf, Charles R.; Plaut, Gerhard W. E.
CS Sch. Med., Temple Univ., Philadelphia, PA, 19140, USA
SO Anal. Lett. (1983), 16(A2), 113-27
CODEN: ANALBP; ISSN: 0003-2719
DT Journal
LA English
AB The trisodium salt of o-(1,8-dihydroxy-3,6-disulfo-2-naphthylazo)benzenearsonic acid was used as metallochromic indicator for the spectrophotometric detn. of apparent stability consts. of Mg and Ca complexes of tricarboxylates and ADP (pH 7.4-8.0). The tricarboxylate studied were citrate, O-Me citrate, DL-erythro-fluorocitrate, DL-threo-isocitrate, DL-threo-.alpha.-methylisocitrate, DL-erythro-.alpha.-methylisocitrate, DL-threo-homoisocitrate, tricarballylate, 3-hydroxyglutarate, garciniate, and hibiscusate.
IT **56323-59-2DP**, complexes with magnesium and calcium
56323-60-5DP, complexes with magnesium and calcium
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and stability const. of)
CC 22-13 (Physical Organic Chemistry)
Section cross-reference(s): 26
IT 58-64-0DP, complexes with magnesium and calcium 77-92-9DP, complexes with magnesium and calcium 99-14-9DP, complexes with magnesium and calcium 520-10-5DP, complexes with magnesium and calcium 638-18-6DP, complexes with magnesium and calcium 18979-21-0DP, complexes with magnesium and calcium 24315-15-9DP, complexes with magnesium and calcium 56298-33-0DP, complexes with magnesium and calcium 56298-34-1DP, complexes with magnesium and calcium **56323-59-2DP**, complexes with magnesium and calcium **56323-60-5DP**, complexes with magnesium and calcium 71183-66-9DP, complexes with magnesium and calcium 86404-09-3DP, complexes with magnesium and calcium 86406-84-0DP, complexes with magnesium and calcium 86470-11-3DP, complexes with magnesium and calcium
RL: PRP (Properties); SPN (Synthetic preparation); PREP

(Preparation)
(prepn. and stability const. of)

L8 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1983:438304 HCAPLUS
DN 99:38304
TI Chlorocitric acids
IN Guthrie, Robert W.; Kierstead, Richard W.; Mennona, Francis A.; Sullivan, Ann C.
PA Hoffmann-La Roche, Inc., USA
SO U.S., 23 pp. Cont.-in-part of U.S. 4,312,885.
CODEN: USXXAM
PI US 4365070 A 19821221
AI US 81-312041 19811016
PRAI US 78-973504 19781226
DT Patent
LA English
GI

/ Structure 10 in file .gra /

AB Isomeric lactones I were prepd. Thus, tri-Na trans-aconitate was treated with Cl2 to give (.+-.)-threo-I which was resolved with brucine. At 69 mg/kg orally in rats (+)-threo-I depressed food intake to 35% of controls.
IT **27750-10-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and appetite depressant activity of)
IC C07D305-06
NCL 549263000
CC 26-9 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1
IT **27750-10-3P** 76432-76-3P 76432-78-5P 79312-39-3P
79312-40-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and appetite depressant activity of)

L8 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1982:30421 HCAPLUS
DN 96:30421
TI Hydroxycitrate
AU Lowenstein, John M.; Brunengraber, Henri
CS Dep. Biochem., Brandeis Univ., Waltham, MA, 02254, USA
SO Methods Enzymol. (1981), 72(Lipids, Part D), 486-97
CODEN: MENZAU; ISSN: 0076-6879
DT Journal; General Review
LA English
AB A review with 29 refs. on the properties of hydroxycitrate, a competitive inhibitor of ATP-citrate lyase, and its effects on fatty acid and .beta.-hydroxysterol synthesis and on ketogenesis.
IT **6205-14-7P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(stereoisomers of, prepn. and properties of, lipid metab. in relation to)

CC 7-0 (Enzymes)
IT **6205-14-7P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(stereoisomers of, prepn. and properties of, lipid metab. in relation to)

L8 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1982:29110 HCAPLUS
DN 96:29110
TI Origin of acetyl groups of acetylcholine in the brain and the role of acetylcoenzyme A in the control of its synthesis
AU Tucek, Stanislav; Dolezal, V.; Ricny, J.
CS Inst. Physiol., Czech. Acad. Sci., Prague, 14220, Czech.
SO Adv. Behav. Biol. (1981), 25(Cholinergic Mech.), 415-24
CODEN: ADBBBW; ISSN: 0099-6246
DT Journal
LA English
AB Slices of rat caudate nuclei synthesized acetylcholine [51-84-3] from the following substrates in order of preference: pyruvate [127-17-3] >glucose [50-99-7] > acetylcarnitine [3040-38-8] > citrate [77-92-9] > acetate [64-19-7]. (-)-hydroxycitrate [27750-10-3] Decreased the utilization of pyruvate and glucose for acetylcholine synthesis by only 25-33%, indicating that ATP citrate-lyase [9027-95-6] was responsible for the supply of only 25-33% of the acetyl CoA [72-89-9] used for the synthesis of acetylcholine from pyruvate or glucose. A direct correlation was obsd. between tissue levels of acetyl CoA and acetylcholine, and in expts. with 30 mM K+, also between the level of acetyl CoA in the tissue and the amt. of acetylcholine released into the medium in expts in which caudate nuclei slices were incubated in the presence of varying concns. of glucose. Acetyl CoA and acetylcholine levels were also directly related in slices that were incubated in the presence of metabolic inhibitors. Apparently, the reaction of acetylcholine synthesis is close to equil. in cholinergic neurons and the level of acetylcholine in the compartment of its synthesis depends on the supply of both substrates and the removal of both products of the reaction catalyzed by choline acetyltransferase.
IT **27750-10-3P**
RL: PREP (Preparation)
(acetylcholine formation from glucose and pyruvate inhibition by)
CC 2-8 (Mammalian Hormones)
IT **27750-10-3P**
RL: PREP (Preparation)
(acetylcholine formation from glucose and pyruvate inhibition by)

L8 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1981:57300 HCAPLUS
DN 94:57300
TI A study of lanthanide(III) (hydroxy)carboxylate complexes in aqueous medium using lanthanide induced oxygen-17 NMR shifts
AU Vijverberg, C. A. M.; Peters, J. A.; Kieboom, A. P. G.; Van Bekkum, H.
CS Lab. Org. Chem., Delft Univ. Technol., Delft, 2600 GA, Neth.
SO Recl. Trav. Chim. Pays-Bas (1980), 99(12), 403-9
CODEN: RTCPA3; ISSN: 0034-186X
DT Journal

LA English
AB The complexation of Dy(III), as the model cation for Ca(II), with a series of (hydroxy)carboxylates in aq. medium, was studied by 17O NMR spectroscopy. Acetate, 3-hydroxybutyrate, glycolate, lactate, malonate, malate and citrate show fast ligand exchange on the 17O NMR time scale at 73.degree.. The Dy(III)-induced 17O shifts of both the ligand and the H2O, which are mainly due to contact interaction, provide valuable information on the complexation sites of the ligands as well as on the no. of coordinated H2O mols. in the complexes. The results point to a rather const. 17O contact shift upon the formation of Dy(III)-O bonds. On the other hand, oxydiacetate, (carboxymethoxy)succinate, and nitrilotriacetate show slow ligand exchange on the 17O NMR time scale at 73.degree.. In these cases the Dy(III)-induced shift of the 17O H2O resonance provides information on the stoichiometry of the complexes, i.e., the no. of coordinated H2O mols. and the no. of ligands.
IT **76310-12-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 73
IT 7440-70-2DP, hydroxycarboxylate complexes 76310-10-6P
76310-11-7P **76310-12-8P** 76310-13-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L8 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1976:401332 HCAPLUS
DN 85:1332
TI Transfer of acetyl-units through the mitochondrial membrane: evidence for a pathway different from the citrate pathway
AU Walter, Ulrich; Soeling, Hans D.
CS Abt. Klin. Biochem., Med. Universitaetsklin., Goettingen, Ger.
SO FEBS Lett. (1976), 63(2), 260-6
CODEN: FEBLAL
DT Journal
LA English
AB The existence of a metabolic path transporting Ac groups across the mitochondrial membrane, which differs from the citrate system, was investigated. In citrate synthesis from 3H- and 14C-labeled acetyl-CoA catalyzed by citrate synthase, 22% of 3H was lost; however, no 3H was lost during transfer of radioactivity from 3H- and 14C-labeled citrate into the Ac group of 4-acetamidoantipyrine (I) by the citrate-cleaving enzyme + arylamine transacetylase. The high loss of 3H during conversion of radioactive-labeled L-alanine into the I Ac group in liver mitochondria + supernatant is probably due to H exchange during alanine transamination. The 3H loss from labeled L-lactate during conversion into the Ac group of I was also larger than that due to the citrate synthase reaction. (-)-Hydroxycitrate under all conditions increased the 3H sp. radioactivity in I by .apprx.15-20%. Further, hydroxycitrate inhibited I formation. When mitochondria were incubated with supernatant in the presence of labeled lactate, an inhibitor of pyruvate kinase, and in the absence of K+, 3H loss during the conversion of lactate into the I Ac group was reduced and the sp. radioactivity of I rose in the presence of hydroxycitrate by .apprx.20% Ac group transfer across the mitochondria may occur via

AcO-, acetylcarnitine, or acetyl-CoA.

IT **27750-10-3P**
RL: PREP (Preparation)
(acetamidoantipyrine formation from alanine or lactate by liver mitochondria supernatant inhibition of)

CC 6-1 (General Biochemistry)

IT **27750-10-3P**
RL: PREP (Preparation)
(acetamidoantipyrine formation from alanine or lactate by liver mitochondria supernatant inhibition of)

L8 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 1998 ACS
AN 1967:469394 HCAPLUS
DN 67:69394
TI Action of chemical species generated from water radiolysis on carbon-carbon double bonds
AU Le Roux, Yvonne; Noyer, Helene; Nofre, Claude
CS Div. Chim. Pharmacol. Centre Rech. Serv. Santa Armees, Lyon, Fr.
SO Bull. Soc. Chim. Fr. (1967), (6), 2003-11
CODEN: BSCFAS
DT Journal
LA French
AB Aq. solns. of maleic acid-2,3-14C (I), a mixt. of fumaric acid (II) and II-1,4-14C,14C-labeled aconitic acid (III), cyclohexene (IV), and 1-methylcyclohexene (V) were irradiated (.gamma.-rays, 60Co), and the effect of dissolved O, pH, and rate of irradn. on the products obtained was studied. Citric acid-1,5-14C (210 mg.) in 0.2 ml. H2O is treated at 140.degree. with 0.1 ml. H2SO4 (d. 1.83) to give III contg. 89.5% cis isomer and 10.5% trans isomer. Similarly prepd. is IV-1-14C. Irradn. of II gives, in the absence of O, maleic acid, succinic acid, dihydroxymaleic acid, and CH2(CO2H)2; Meso-tartaric acid, tartaric acid, and tartronic acid are obtained in the presence of O. I behaves in a similar manner. Citric acid, isocitric acid (VI), tricarballylic acid, and hydroxycitric acid are obtained from III; 81% citric acid and 19% VI are obtained at pH .apprx.3 in the absence of O, and hydration is predominant in the absence of O. IV gives trans-1,2-cyclohexanediol (VII) at an irradn. rate of 7 .times. 103 rads/min.; a rate of 8.5 .times. 102 rads/min. gives a mixt. contg. 8.4% cis-VII. 1-Methyl-1,2-cyclohexanediols are obtained from V in the absence and presence of O. The Fenton reaction (Fe++ + H2O2 .fwdarw..cntdot.OH) of the olefins was studied; I and II-1,4-14C give malic, meso-tartaric, and tartaric acids; IV gives results which are similar to those obtained from .gamma.-irradn. yielding a mixt. of 94% trans-VII and 6% cis-VII, and V gives only the trans isomer. 61 references.

IT **6205-14-7P**
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in radiolysis of aq. cyclohexene)

CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT 77-92-9P, preparation 99-14-9P 320-77-4P **6205-14-7P**
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in radiolysis of aq. cyclohexene)

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FILE 'BIOSIS' ENTERED AT 09:30:18 ON 09 NOV 1998

FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

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CAS REGISTRY NUMBERS (R) LAST ADDED: 5 November 1998 (981105/UP)

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     FILE 'REGISTRY' ENTERED AT 09:25:07 ON 09 NOV 1998
L1             1 S 27750-10-3

     FILE 'BIOSIS' ENTERED AT 09:25:34 ON 09 NOV 1998

     FILE 'REGISTRY' ENTERED AT 09:25:43 ON 09 NOV 1998
L2             1 S 185196-38-7

     FILE 'BIOSIS' ENTERED AT 09:25:53 ON 09 NOV 1998
L3             6 S L1 OR L2
L4            97 S HYDROXYCITRIC  OR HYDROCITRATE OR HYDROXY (W) (CITRIC O
L5             2 S L4 AND( POTASSIUM OR K)
L6          5363 S APPETITE
L7             4 S L6 AND L4
L8         78908 S ALCOHOL OR ALC#
L9             0 S L4 AND L8
L10            1 S L4 AND (EXTRACT? OR EXTN?)
L11            7 S L5 OR L7 OR L10

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=> d bib ab st 1-7

L11 ANSWER 1 OF 7 BIOSIS COPYRIGHT 1998 BIOSIS
AN 96:40194 BIOSIS
DN 98612329
TI (-) **Hydroxycitric** acid from Garcinia cambogia.
AU Singh R P; Jayaprakasha G K; Sakariah K K
CS Manpower Dev., Cent. Food Technol. Res. Inst., Mysore-570 013, India
SO Biological Memoirs 21 (1). 1995. 27-33. ISSN: 0379-8097
LA English
AB Crystals of (-) **hydroxycitric** acid were prepared from water **extract** of Garcinia cambogia by precipitation as calcium or barium salt and desalting on cation exchange resin. Water was removed by distillation with immiscible solvent, followed by

recrystallization of (-) **hydroxycitric** acid lactone in ether. Purity of the preparation was confirmed by spectroscopic and chemical studies.
ST RESEARCH ARTICLE; GARCINIA CAMBOGIA; AQUEOUS **EXTRACTION**; PURIFICATION METHOD

L11 ANSWER 2 OF 7 BIOSIS COPYRIGHT 1998 BIOSIS
AN 83:201341 BIOSIS
DN BA75:51341
TI ACETYL COENZYME A AND ACETYL CHOLINE IN SLICES OF RAT CAUDATE NUCLEI INCUBATED WITH LEVO **HYDROXY CITRATE** CITRATE AND ETHYLENE GLYCOL BIS-BETA AMINOETHYL ETHER N N N N' TETRA ACETIC-ACID.
AU RICNY J; TUCEK S
CS ACADEMY SCIENCES, INSTITUTE PHYSIOL., VIDENSKA 1083, 142 20 PRAGUE, CZECHOSLOVAKIA.
SO J NEUROCHEM 39 (3). 1982. 668-673. CODEN: JONRA9 ISSN: 0022-3042
LA English
AB The effects of (-)-hydroxycitrate (OHC) and citrate on the concentration of acetyl-CoA and acetylcholine (ACh) in the tissue and on the release of ACh into the medium were investigated in experiments on slices of rat caudate nuclei incubated in media with 6.2 or 31.2 mM **K+**, 0 or 2.5 mM Ca2+ and 0, 1 or 10 mM EGTA [ethylene glycol bis-(.beta.-aminoethyl)ether-N,N,N,N'-tetraacetic acid]. OHC diminished the concentration of acetyl-CoA in the slices under all conditions used; in experiments with 2.5 mM OHC, the concentration of acetyl-CoA was lowered by 25-38%. Citrate had no effect on the level of acetyl-CoA in the tissue. Although both OHC and citrate lowered the concentration of ACh in the slices during incubations with 6.2 mM **K+** and 1 mM EGTA, they had different effects on the content of ACh during incubations in the presence of Ca2+. The concentration of ACh in the slices was increased by citrate during incubations with 2.5 mM Ca2+ and 31.2 or 6.2 mM **K+**, but it was lowered or unchanged by OHC under the same conditions. The release of ACh into the medium was lowered or unchanged by OHC and lowered, unchanged or increased by citrate. Most effects of OHC on the metabolism of ACh can be explained by the inhibition of ATP-citrate lyase; with glucose as the main metabolic substrate. ATP-citrate lyase appears to provide .apprx. 1/3 of the acetyl-CoA used for the synthesis of ACh. Experiments with citrate indicate that an increased supply of citrate may increase the synthesis of ACh. The inhibitory effect of citrate on the synthesis of ACh, observed during incubations without Ca2+, is interpreted to be a consequence of the chelation of intracellular Ca2+; this interpretation is supported by the observation of a similar effect caused by 10 mM EGTA.
ST ATP CITRATE LYASE GLUCOSE CALCIUM METABOLISM

L11 ANSWER 3 OF 7 BIOSIS COPYRIGHT 1998 BIOSIS
AN 82:74587 BIOSIS
DN BR23:4579
TI EFFECTS OF LEVO **HYDROXY CITRATE** AND CITRATE ON ACETYL COENZYME A AND ACETYL CHOLINE IN SLICES OF RAT CAUDATE NUCLEI.
AU RICNY J; TUCEK S
CS INST. PHYSIOL., CZECH. ACAD. SCI., PRAGUE.
SO MEETING OF THE CZECHOSLOVAK PHYSIOLOGICAL SOCIETY, FEB. 2-4, 1981. PHYSIOL BOHEMOSLOV 30 (5). 1981. 454. CODEN: PHBOBQ ISSN: 0369-9463
DT Conference

LA English
ST ABSTRACT METABOLIC-DRUG **POTASSIUM** CALCIUM CHELATION

L11 ANSWER 4 OF 7 BIOSIS COPYRIGHT 1998 BIOSIS
AN 79:138512 BIOSIS
DN BA67:18512
TI LEVO **HYDROXY CITRATE** AND CONDITIONED AVERSIONS.
AU PANKSEPP J; POLLACK A; MEEKER R B; SULLIVAN A C
CS DEP. PSYCHOL., BOWLING GREEN STATE UNIV., BOWLING GREEN, OHIO 43403, USA.
SO PHARMACOL BIOCHEM BEHAV 6 (6). 1977 683-688. CODEN: PBBHAU ISSN: 0091-3057
LA English
AB The ethylenediamine salt of (-)-hydroxycitrate produced strong conditioned rejection of saccharin in rats under both deprivation and nondeprivation conditions; this effect was less than that produced by equimolar doses of LiCl. The Na salt of hydroxycitrate produced no conditioned rejection of saccharin in water deprived rats but did so in nondeprived animals. Food intake was reduced by (-)-hydroxycitrate only during the 1st h following drug administration. The magnitude of **appetite** rejection did not correspond to the degree of conditioned rejection, indicating that the food intake reduction was not a consequence of aversive effects of the drug.
ST RAT METABOLIC-DRUG SACCHARIN LITHIUM CHLORIDE WATER DEPRIVATION FOOD INTAKE **APPETITE** REJECTION

L11 ANSWER 5 OF 7 BIOSIS COPYRIGHT 1998 BIOSIS
AN 76:65921 BIOSIS
DN BR12:65921
TI POSSIBLE INTERRELATIONSHIP BETWEEN METABOLITE FLUX AND **APPETITE**.
AU SULLIVAN A C; TRISCARI J
SO NOVIN, DONALD ET AL (ED.). HUNGER. BASIC MECHANISM AND CLINICAL IMPLICATIONS. MEETING. LOS ANGELES, CALIF., U.S.A., JAN 15-17, 1975. XV+494P. ILLUS. RAVEN PRESS: NEW YORK, N.Y., U.S.A. 1976 115-125 ISBN: 0-89004-059-1
LA Unavailable
ST RAT INSULIN GLUCOSE FREE FATTY-ACID LEVO **HYDROXY CITRATE** METAB-DRUG LIPOGENESIS GLYCOGENESIS FOOD CONSUMPTION

L11 ANSWER 6 OF 7 BIOSIS COPYRIGHT 1998 BIOSIS
AN 76:37786 BIOSIS
DN BR12:37786
TI LEVO **HYDROXY CITRATE** INTERRELATIONSHIPS AMONG LIPOGENESIS GLYCOGENESIS AND **APPETITE**.
AU SULLIVAN A C; TRISCARI J; MILLER O N
SO FED PROC 35 (3). 1976 656 CODEN: FEPRA7 ISSN: 0014-9446
DT Conference
LA Unavailable
ST ABSTRACT RAT METAB-DRUG **APPETITE** SUPPRESSANT

L11 ANSWER 7 OF 7 BIOSIS COPYRIGHT 1998 BIOSIS
AN 74:72749 BIOSIS
DN BR10:72749
TI EFFECT OF LEVO **HYDROXY CITRATE** UPON THE ACCUMULATION OF LIPID IN THE RAT PART 2 **APPETITE**.
AU SULLIVAN A C; TRISCARI J; HAMILTON J G; MILLER O N

SO LIPIDS 9 (2). 1974 129-134 CODEN: LPDSAP ISSN: 0024-4201
LA Unavailable
ST METAB-DRUG

=> fil wpids

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(FILE 'WPIDS' ENTERED AT 09:30:43 ON 09 NOV 1998)
DEL HIS Y
L1 21 S HYDROXY (W) (CITRIC ACID OR CITRATE) OR HYDROXYCITRIC O
L2 22 S GARCINIA ACID OR L1
L3 1 S L2 AND (POTASSIUM OR K)
L4 8 S L2 AND (EXT## OR EXTRACT?)
L5 4 S L2 AND APPETITE
L6 10 S L3 OR L4 OR L5

FILE 'WPIDS' ENTERED AT 09:33:25 ON 09 NOV 1998

=> d .wp 16 1-10

L6 ANSWER 1 OF 10 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 98-456852 [39] WPIDS
DNC C98-138095
TI Athletic endurance re-enforcing agent and food containing it - comprises garcinia **extract** containing (-)-**hydroxy -citric acid**, its lactone or a salt of either.
DC D13
IN ANNO, T; FUSHIKI, T; ISHIHARA, K; TOMI, H
PA (NNSH) NIPPON SHINYAKU CO LTD
CYC 24
PI WO 9835664 A1 980820 (9839)* JA 18 pp
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT LU MC NL PT SE
W: CA CN JP KR RU US
ADT WO 9835664 A1 WO 98-JP533 980209
PRAI JP 97-28914 970213
AB WO 9835664 A UPAB: 981001
Athletic endurance reinforcing agent contains, as the active ingredient (-)-**hydroxycitric** acid, its lactone or a salt of either. Foods containing this athletic endurance reinforcing agent are snacks, drinks, sports foods, sports drinks, health food,

noodles, bread, cereals and ingredients.
USE - The agent is useful for increasing athletic endurance.
ADVANTAGE - Even (-)-**hydroxycitric** acid, which is believed to have a pharmaceutically weak effect, can provide enough activity to be utilised as an agent.
Dwg.0/0

L6 ANSWER 2 OF 10 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 98-261418 [23] WPIDS
DNC C98-081215
TI New magnesium **hydroxy-citrate extracted** from Garcinia cambogia - used as hypolipaemic, anticholesterol and atheromatous agent.
DC B05
IN LAMBROPOULOS, P; SHRIVASTAVA, R
PA (LAMB-I) LAMBROPOULOS P; (SHRI-I) SHRIVASTAVA R
CYC 22
PI WO 9817671 A1 980430 (9823)* FR 22 pp
RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA JP KR US
FR 2754820 A1 980424 (9823)
AU 9748717 A 980515 (9838)
ADT WO 9817671 A1 WO 97-FR1860 971017; FR 2754820 A1 FR 96-13094 961022; AU 9748717 A AU 97-48717 971017
FDT AU 9748717 A Based on WO 9817671
PRAI FR 96-13094 961022
AB WO 9817671 A UPAB: 980610
Magnesium (-) **hydroxy citrate** (I) is new. Also claimed is a composition containing (I) formulated with an ionised or non-ionised metal selected from magnesium, copper, cobalt, zinc, nickel, selenium, silicon, manganese, lithium and iron and vitamins. Preferably 0.1-2 pts. metal salt or oxide and 0.1-1 pts. vitamin(s) are used per part of (I).
An **extract** of Garcinia cambogia, a tree of South East Asia used in traditional medicine, is treated with an aliphatic alcohol, preferably propanol, isopropanol, or ethanol, to give a precipitate which is treated with a tannin-fixer especially polyvinyl pyrrolidone. The solids are eliminated, usually by centrifuging, and the supernatant liquid is stirred in contact with an anion exchange resin. The liquid is eliminated and (I) eluted from the resin with a solution of magnesium chloride and dried, pref. by lyophilisation.
USE - (I) has hypolipaemic, anticholesterol and antiatheromatous action, and is an antioxidant, especially against free radicals. (I) is used for treating cardiovascular disorders and particularly in reducing cholesterol synthesis, inhibiting the accumulation of and assisting in the elimination of lipids in vascular smooth muscle cells, and reducing the cell proliferation due to the reduction of intracellular lipids, so reducing fatty deposits on the vascular endothelium. (I) is used in dietetic and nutritional products and in cosmetics. (I) may be administered orally at a dose of 100-1000 mg in a unit dose of 50 mg or parenterally.
Dwg.0/0

L6 ANSWER 3 OF 10 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 98-123775 [12] WPIDS

DNC C98-040704
TI Drink for reducing **appetite** - comprises **hydroxy-citric acid** and carbon di oxide..
DC B05 D13
PA (NNSH) NIPPON SHINYAKU CO LTD
CYC 1
PI JP 10004939 A 980113 (9812)* 6 pp
ADT JP 10004939 A JP 96-167746 960627
PRAI JP 96-167746 960627
AB JP10004939 A UPAB: 980323
Drink comprises **hydroxycitric** acid (HCA) and carbon dioxide.
HCA is preferably derived from plant **extracts** belonging to Garcinia group, especially Garcinia cambogia Desr., indica Choisy and atroviridis Griff. The amount of HCA is 0.01-50 wt.%. The amount of carbon dioxide is 0.5-15 kg/cm2 at 20 deg. C. The drink is sealed in an aerosol container which can spray.
USE - The drink when taken before meals can decrease the amount of food for ingestion naturally without causing a sense of empty stomach and contributes to control of body weight.
ADVANTAGE - By addition of carbon dioxide into the drink, sterilisation is carried out under mild conditions and lactonisation of HCA is minimised. Acidity of HCA is reduced and the addition of sugar substance can be decreased.
Dwg.0/0

L6 ANSWER 4 OF 10 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 98-045635 [05] WPIDS
DNC C98-015501
TI Nutrition-adjusted food for baked confectionery - contains powdered Garcinia cambodia **extract**.
DC D13
PA (NISH-I) NISHIDA H
CYC 1
PI JP 09294563 A 971118 (9805)* 4 pp
ADT JP 09294563 A JP 96-137561 960508
PRAI JP 96-137561 960508
AB JP09294563 A UPAB: 980202
A nutrition-adjusted food for baked confectionery contains powdered Garcinia cambodia **extract** in a baked confectionery prod. Pref. the food contains 0.2-6. 0 g of the **extract**, based on a content of **hydroxycitric** acid(HCA) in the **extract** of about 50%, in about 80 g of the food.
Also claimed is a nutrition-adjusted food for baked confectionery contg. the **extract** and one or more of vitamins and minerals in a baked confectionery product.
USE - The food is suitable for diets to reduce the body wt.
ADVANTAGE - The **extract** inhibits synthesis of body fat effectively and con vets excessive sugar to glycogen.
Dwg.0/0

L6 ANSWER 5 OF 10 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 97-538948 [50] WPIDS
DNC C97-172440
TI Use of azadirachta indica, **hydroxycitrate**, ceramides and optionally vitamins or caffeine - to treat hypercholesterolaemia, cardiovascular disease and obesity and used as cosmetic and food

supplement.
DC B04 B05 D13 D21
PA (SHRI-I) SHRIVASTAVA R
CYC 1
PI FR 2747308 A1 971017 (9750)* 14 pp
ADT FR 2747308 A1 FR 96-4763 960411
PRAI FR 96-4763 960411
AB FR 2747308 A UPAB: 980119
Composition (I) comprises Azadirachta indica (margosa) bark **extract**, (-)-**hydroxycitrate** and ceramides.
USE - (I) is used in cosmetics, in oral or dental hygiene, and as a food supplements for humans or animals (claimed). (I) has anticholesterolaemic effects and can be used to treat or prevent hypercholesterolaemia and diseases caused by high cholesterol levels or by stress (e.g. vascular stenosis, lipidic streaks, formation of atheroma, thrombosis, and cardiovascular diseases affecting the macro- and micro-circulation). (I) can also be used to treat excess weight and fat, hyperlipidaemia, to reduce local or general deposits of lipids or fats, acne, spots, inflammation and local infections. Administration is oral or topical. The daily oral dosage for treatment of hypercholesterolaemia is 20-300 mg margosa bark **extract**, 300-1000 mg **hydroxycitrate** and 50-500 mu g ceramides. For local application, 2 g of (I) in the form of a gel can be applied twice daily.
ADVANTAGE - (I) is not irritant and has good skin penetration. This is an improvement on local application of (-)-**hydroxycitrate** which is an irritant and has poor skin penetration.
Dwg.0/0

L6 ANSWER 6 OF 10 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 97-387278 [36] WPIDS
DNC C97-124318
TI Carnitine or alkanoyl-carnitine in lipid metabolism disorders - e.g. obesity, cardiovascular, thromboembolic, atherosclerotic, as compositions with hydroxy-citric or pantothenic acids.
DC B05
IN CAVAZZA, C; CAVAZZA, G
PA (SIGT) SIGMA-TAU IND FARM RIUNITE SPA; (AMHP) AMERICAN HOME PROD CORP
CYC 22
PI EP 787489 A2 970806 (9736)* EN 9 pp
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 09176004 A 970708 (9737) 8 pp
ZA 9610508 A 970827 (9740) 26 pp
CA 2192899 A 970616 (9742)
EP 787489 A3 970910 (9746)
KR 97032854 A 970722 (9829)
KR 97032856 A 970722 (9829)
IT 1276253 B 971027 (9840)
ADT EP 787489 A2 EP 96-830617 961211; JP 09176004 A JP 96-330682 961211; ZA 9610508 A ZA 96-10508 961213; CA 2192899 A CA 96-2192899 961213; EP 787489 A3 EP 96-830617 961211; KR 97032854 A KR 96-63851 961210; KR 97032856 A KR 96-62011 961205; IT 1276253 B IT 95-RM824 951215
PRAI IT 95-RM824 951215; US 95-8337 951207
AB EP 787489 A UPAB: 981021
Orally, parenterally, transdermally, or rectally administrable

composition, for treating cardiovascular, thromboembolic, atherosclerotic or hyper-lipidaemic disorders, obesity, and to decrease **appetite**, comprises:

(a) L-carnitine of its 2-8C, preferably 2-6C alkanoyl L-carnitine or their salts, and

(b) **hydroxycitric** (HCA) or pantothenic acids (PTA) or their derivatives, as active ingredients with an excipient.

USE - The two active agents both exert an action on lipid metabolism by different mechanisms, and are synergistic. Suitable formulations are in solid (tablet, capsule), semisolid, powder, granular, liquid in vials or as liposomes (all claimed).

Dwg.0/0

L6 ANSWER 7 OF 10 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 97-271252 [24] WPIDS
DNC C97-087173
TI Weight-loss compsn. for burning and reducing synthesis of fats - comprising (-)-**hydroxy- citric acid**, L-carnitine, chromium, choline, inositol, gamma-linolenic acid, herbs and antioxidants.
DC B05
IN BARNES, D J; HASTINGS, C W
PA (RELI-N) RELIV' INT INC
CYC 1
PI US 5626849 A 970506 (9724)* 10 pp
ADT US 5626849 A US 95-484378 950607
PRAI US 95-484378 950607
AB US 5626849 A UPAB: 970612

A weight-loss composition comprises: 250-500mg (-)-**hydroxycitric** acid; 50-125mg L-carnitine; 25-100 mu g chromium; 25-100mg choline; 25-100mg inositol; 25-100mg gamma -linolenic acid; 15-75mg herbs; and 5-30mg antioxidants. The compsn. may further comprise 0.15-0.35g soy lecithin; 0-10g carbohydrate and 0.1-0.5g oat flour.

USE - The compsn. is used as a dietary supplement to help facilitate weight loss. The compsn. helps burn fat stores as well as reduce the synthesis of fats, whilst curbing **appetite** and reducing cravings.

Dwg.0/0

L6 ANSWER 8 OF 10 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 97-012008 [01] WPIDS
DNC C97-003319
TI Prodn. of **potassium hydroxy citric acid** - comprises **extracting** Garcinia fruit with alkyl alcohol, treating with **potassium** hydroxide and precipitating the prod..
DC B05 D16
IN BADMAEV, V; MAJEED, M; RAJENDRAN, R
PA (SABI-N) SABINSA CORP
CYC 70
PI WO 9636585 A1 961121 (9701)* EN 45 pp
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN

AU 9657360 A 961129 (9712)
US 5783603 A 980721 (9836)
ADT WO 9636585 A1 WO 96-US6554 960515; AU 9657360 A AU 96-57360 960515; US 5783603 A Cont of US 95-440968 950515, US 97-829143 970331
FDT AU 9657360 A Based on WO 9636585
PRAI US 95-440968 950515; US 97-829143 970331
AB WO 9636585 A UPAB: 970102
The following are claimed:(1) prodn. of **potassium hydroxy citric acid** by:
(a) providing Garcinia fruit;
(b) **extracting** the Garcinia fruit with an alkyl alcohol;
(c) treating the **extract** with KOH and precipitating the **potassium hydroxy citrate**, and
(d) recovering the **potassium hydroxy citrate**, and(2) prodn. of **potassium hydroxy citric acid** by
:(a) as (a) above;
(b) **extracting** the Garcinia fruit with MeOH at reflux temp. and collecting the **extract**;
(c) repeating step (b) twice;
(d) combining the 3 **extracts** of steps (b) and (c);
(e) treating the combined **extracts** with methanolic KOH at pH 10 and refluxing for about 3 hrs. to ppte. **potassium hydroxy citrate**;
(f) filter the precipitate;
(g) washing with MeOH and drying under vacuum, and
(h) milling, sifting, blending and packing the dried prod. under nitrogen.

USE - **Potassium hydroxy citrate** is useful as a natural **appetite** suppressant (claimed). The process provides **hydroxy citric acid** which is ready-to-use or can be combined with an alkali metal or any other chemical combination to obtain a chemically stable and biologically effective organic or inorganic complex of the **hydroxy citric acid** for human and animal consumption.

ADVANTAGE - The alkali salts of **hydroxy citric acid** are not hygroscopic, are soluble in aq. soln. and are easily absorbed by the G.I. tract. The process provides the free acid form stabilised as **potassium** salt to retain its activity.

Dwg.0/5

L6 ANSWER 9 OF 10 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 96-151058 [15] WPIDS
DNC C96-047377
TI **Hydroxy citric acid** concentrate prepd. from Garcinia rind - comprises free **hydroxy citric acid**, its lactone and citric acid.
DC D13 E17
IN BHANDARI, A K; MOFFETT, S A; RAVINDRANATH, B; BALASUBRAMANVAM, K
PA (RENA-N) RENAISSANCE HERBS INC; (VITT-N) VITTAL MALLYA SCI RES FOUND; (BALA-I) BALASUBRAMANVAM K; (BHAN-I) BHANDARI A K; (MOFF-I) MOFFETT S A; (RAVI-I) RAVINDRANATH B
CYC 64
PI WO 9605741 A1 960229 (9615)* EN 21 pp
RW: AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE

SZ UG
W: AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS
JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT
RO RU SD SE SG SI SK TJ TM TT UA UG UZ VN
AU 9534129 A 960314 (9625)
US 5536516 A 960716 (9634) 5 pp
EP 782399 A1 970709 (9732) EN
R: DE FR GB IT
US 5656314 A 970812 (9738) 5 pp
BR 9508766 A 971111 (9801)
JP 10504826 W 980512 (9829) 18 pp
KR 97705346 A 971009 (9841)
ADT WO 9605741 A1 WO 95-US10707 950822; AU 9534129 A AU 95-34129 950822; US 5536516 A US 94-295281 940824; EP 782399 A1 EP 95-930918 950822, WO 95-US10707 950822; US 5656314 A Cont of US 94-295281 940824, US 96-633921 960417; BR 9508766 A BR 95-8766 950822, WO 95-US10707 950822; JP 10504826 W WO 95-US10707 950822, JP 96-508284 950822; KR 97705346 A WO 95-US10707 950822, KR 97-701179 970224
FDT AU 9534129 A Based on WO 9605741; EP 782399 A1 Based on WO 9605741; US 5656314 A Cont of US 5536516; BR 9508766 A Based on WO 9605741; JP 10504826 W Based on WO 9605741; KR 97705346 A Based on WO 9605741
PRAI US 94-295281 940824; US 96-633921 960417
AB WO 9605741 A UPAB: 960417
A **hydroxycitric** acid concentrate prepd. from Garcinia rind comprises: 23-54 wt.% free **hydroxycitric** acid; 6-20 wt.% lactone of **hydroxycitric** acid; 0.001-8 wt.% citric acid; and 32-70 wt.% water; where the free **hydroxycitric** acid, lactone of **hydroxycitric** acid and citric acid constitute 94-99 wt.% of total solutes dissolved in the water.
Also claimed is a process of enriching **hydroxycitric** acid from Garcinia rind, and a food prod. contg. **hydroxycitric** acid.
USE - **Hydroxycitric** acid is an inhibitor of the synthesis of fat and cholesterol. The concentrate can be added to a food prod., pref. a beverage or a snack bar (claimed).
Dwg.0/0

L6 ANSWER 10 OF 10 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 95-303830 [40] WPIDS
DNC C95-135888
TI **Extracts** of Garcinia and Hibiscus have cosmetic and dermatological use - to treat acne, dandruff and seborrhoea, improve skin appearance, combat cellulite, protect against hair loss, aid slimming, etc..
DC B04 D21
IN GREFF, D
PA (SEDE-N) SEDERMA SA
CYC 0
PI FR 2716374 A1 950825 (9540)* 7 pp
ADT FR 2716374 A1 FR 94-1956 940218
PRAI FR 94-1956 940218
AB FR 2716374 A UPAB: 951019
Cosmetic and dermatological compsns. with anti-cellulitic activity, which favour lipolysis and/or regulate lipogenesis and cutaneous cellular renewal, and protect against hair loss, contain an **extract** of Garcinia cambogia or Hibiscus cannabinus vulgaris L.

USE - Cosmetic use for the care of the skin, comprising anti-cellulite, strengthening, anti-seborrhoeic, tonic or epidermal restructuring, treatments, improvement of skin appearance and treatment of the scalp and acne, is claimed. In addn. the **extracts** have cosmetic use for slimming, to diminish the capillary micro-circulation, to give elasticity and firmness to tired skin and against dandruff.

ADVANTAGE - The **extracts** contain **hydroxy-citrate** which inhibits certain enzymes implicated in lipogenesis, partic. ATP:citrate lyase. The **extn.** of Garcinia cambogia can be industrialised at low cost.
Dwg.0/0